APPENDIX C:
FIRE/EMS INTEROPERABILITY QUESTIONNAIRE ¾ SHORT VERSION

INTRODUCTION:

Your agency has been selected to participate in a national study on the use of wireless communication systems for communicating with other departments and other public safety agencies. Participation is voluntary, and your responses will be kept confidential. The data will be analyzed and compiled in a final report. Please indicate below if your agency is willing to be contacted by phone to provide additional information regarding the issue of interoperability and return with the completed questionnaire.

DIRECTIONS:

1) This questionnaire should be completed by the individual in your agency who is most knowledgeable about wireless radio communications with other departments. Assistance by other personnel, if needed, is encouraged. **It will take you a half-hour to an hour to complete the questionnaire.**
2) Read each question carefully.
3) Answer where requested by completely filling in the appropriate oval (e.g. ⬭).
4) PRINT responses where requested. Leave blank spaces to the left of numbers (e.g. ⬚).
5) The response forms will be scanned electronically, use pencil and make a dark mark. Erase completely to change a response.
6) If you wish to expand on the information you are providing, please feel free to make additional comments on page 8 of the questionnaire.
7) DO NOT fold, bend, or staple the questionnaire.
8) Return the completed questionnaire in the enclosed pre-addressed, stamped envelope as soon as possible.

If you need assistance or additional information, please call 1-800-565-PSWN and leave a message or contact Steve Gervais, with the PSWN Program at 703-279-2081.

Thank you for your participation in this important study.

DATA SUPPLIED BY:
Department Name:
Contact/Person:
Title:
Agency address:
City: State: Zip:
Tele:Area code: Number :   —   Extension:
FAX:Area code: Number :   —
E-mail address:

Return to: **Public Safety Wireless Network**
c/o Research Applications, Inc.¨ 414 Hungerford Drive Suite 220¨ Rockville, MD 20850-4125

○ **Yes, please send a copy of the executive summary of this study.**

○ **Yes, my agency is willing to be contacted by phone to provide more information regarding the issue of interoperability.**

○ **Yes, my agency would like to receive more information about the PSWN program.**

DEFINITIONS

1) Definition of Interoperability: Essential communication links within or between public safety and public service communication systems that permit units from two or more different agencies to interact with one another and to exchange information according to a prescribed method in order to achieve predictable results. This may include communication between governmental and non-governmental public safety and public service providers.

2) Types of Interoperability Responses: *Day-to-Day, Mutual Aid, and Task Force*

Day-to-Day Response (e.g., Mode 1, automatic aide, routine structure fire, automobile accident)
- Most often encountered type of interoperability.
- Commonly used in areas of concurrent jurisdiction.
- Commonly used where agencies need to monitor each other's routine traffic.
- If agencies are using different radio bands, may involve the use of multiple radios.
- Communications with other primary response agencies.
- Communications with receiving medical facilities.

Mutual Aid Response (e.g., Mode 2 or 3, railroad derailment, hazardous materials incident, multi-related disasters)
- Can involve multiple agencies with little opportunity for prior planning.
- Often requires assignment of several to many small groups, each on their own talk group or frequency.
- Once on scene, typically involves the use of portable and mobile radios.

Task Force Response (e.g., Mode 4, extended response/disaster recovery operation or major event)
- Usually involves several levels of government (federal, state, and/or local).
- Typically an opportunity for prior planning exists.
- Usually involves use of portable and/or covert equipment.
- Often requires extensive close-range communications.
- Users may rove in and out of infrastructure coverage (metro to rural, in and out of buildings).

3) Types of Organizations Involved: *Public Safety and Public Service*

- Public Safety Organizations include all federal, state, and local agencies that have been given, by law, the responsibility for protecting and preserving life, property and natural resources.

- Public Service Organizations include all agencies that help furnish, maintain, and protect the infrastructures that promote the public's safety and welfare.

4) Examples of Different Levels of Organizations: *Federal, State, and Local*

Federal Level Organizations
- Public Health Service
- Federal Bureau of Investigaion (FBI)
- Federal Emergency Management Agency (FEMA)
- U.S. Forest Service
- Coast Guard
- CHEMTREC
- Bureau of Alcohol, Tobacco, and Firearms (BATF) Office

State Level Organizations
- State Fire Marshal
- State EMS Directors
- State Police
- State Department of Transportation
- Department of Fish and Wildlife

Local Level Organizations
- City Police Department
- Fire Department
- Hospital
- Hazardous Materials (HazMat) Team
- Urban Search and Rescue (USAR) Team
  - Confined Space Rescue Team
  - Local Emergency Management
- County Sheriff's Department
- Emergency Medical Services
  - Private Security
  - Local Media
  - Chemical Recovery Companies
- Utilities
- Railroads

- Department of Highways/Roads
- State Emergency Preparedness
- State Department of Health

- American Red Cross

Section I. DESCRIPTIVE INFORMATION

1. **Which category below best describes your agency? Fill in ONLY ONE.**

   ◯ Fire Protection District/Volunteer Fire Department

   ◯ Municipal/City Fire Department

   ◯ County Fire Department

   ◯ State Fire Marshall

   ◯ Special Fire Department
        (e.g. Industrial Fire Brigade, Airport, Harbor)

   ◯ Private For-Profit Ambulance Provider

   ◯ Government Operated EMS Service

   ◯ Non-Government Operated Provider/EMS Provider

   ◯ Emergency Management Center

   ◯ Search and Rescue

   ◯ Other _____

2. **Number of employees in your agency. Fill in ALL that apply.**

☐ , ☐ ☐	Career (paid)
☐ , ☐ ☐	Volunteer (and/or part-time, paid per call)
☐ ☐ ☐	Support Staff (e.g. clerical, vehicle maintenance, etc.)

3. **Number of employees in your agency by PRIMARY ROLE. Fill in ALL that apply. Count each person only ONCE.**

☐ , ☐ ☐	Administrators/Fire Marshals
☐ , ☐ ☐	Field/Line Officers
☐ , ☐ ☐	Fire Fighters
☐ , ☐ ☐	Fire Fighter/EMTs
☐ , ☐ ☐	EMT/Paramedics
☐ , ☐ ☐	Search and Rescue

4. **How many calls for service did your department receive in 1996?**

   ☐ ☐ ☐ ☐ ☐

5. **How many calls were:**

   Fire related ?   ☐ ☐ ☐

   EMS related?   ☐ ☐ ☐

   HazMat related?   ☐ ☐ ☐

6. **What is the population of your district or region?**

   ☐ ☐ ☐ , ☐ ☐ ☐   People

7. **Does your jurisdiction include many high-rise buildings?**

   [_____] No

8. **How many square miles does your jurisdiction cover?**

   ☐ ☐ ☐ ☐ ☐ ☐ ☐ Square Miles

9. **Which of the following best describe the topography/terrain in which your agency operates? Fill in ALL that apply.**

   ◯ Coastal or Intracoastal waterway

   ◯ Relatively flat

   ◯ Rolling hills

   ◯ Mountainous

   ◯ Heavily Forested

Section II. OPERATIONS

1. **Does your agency have at least one radio channel solely designated for communicating with other organizations?**

   [_____] No - SKIP to question #3

2. **If yes, how many?**

   ☐ ☐ ☐ channels

3. **Which of the following best describes your arrangements for dispatch?**

   ◯ Agency/department does its own dispatching

   ◯ Part of a combined dispatch center

   ◯ Contracted Service

   ◯ Commercial Operator

   ◯ Other? Specify _____

4. **What radio frequencies does your agency use to communicate with other public safety and/or public service organizations? Fill in ALL that apply.**

   ◯ Does not apply

   ◯ Low band VHF (25-50 MHz)

   ◯ High band VHF (150-174 MHz)

   ◯ UHF (406-512 MHz)

   ◯ 800 MHz (806-869 MHz)

   ◯ Other _____

5. **What is the PRIMARY radio language used by your agency when communicating with other organizations? Fill in ONLY ONE.**

   ◯ "Plain" English

   ◯ Code System

   ◯ Other _____

6. **To what extent does the use of different radio languages hinder effective communication between your agency and other organizations? (where 1=not a problem to 5=major problem)**

1	2	3	4	5

7. HOW OFTEN does your agency have radio communication with the following levels of public safety and/or public service organizations (see definitions on page 2)?

	Daily	Weekly	Monthly	Yearly	Never
Federal Level?					
State Level?					
Local Level?					

8. Rate your agency's ABILITY to establish a radio communication link with each of the following levels of public safety and/or public service organizations. (where 1=poor to 5=excellent.)

	1	2	3	4	5
Federal Level?					
State Level?					
Local Level?					

9. Does your department have inter-governmental communications agreements with neighboring jurisdictions for mutually defined calls for service or disasters (i.e., automatic aid agreements)?

☐ No

10. Rate the ABILITY of your agency's radio system to effectively handle the three types of communications interoperability as defined on page 2. (where 1=poor to 5=excellent)

	1	2	3	4	5
Day-to-Day					
Mutual Aid					
Task Force					

11. Rate your agency's OVERALL ABILITY to handle communications interoperability situations 5 years ago, today, and estimate its ability 5 years into the future. (where 1=poor to 5=excellent)

	1	2	3	4	5
5 years ago?					
Today?					
5 years from now?					

12. Based on your agency's experience, indicate the severity of each of the following obstacles to interoperability. (where 1=not a problem to 5=major problem)

	1	2	3	4	5
Different Bands?					
Human and Institutional Limitations?					
Different Communication Modes (analog vs. digital)?					
Different Communication Modes (conventional vs. trunked)?					
Different Coverage Areas?					
Limitations of Commercial Services?					
Lack of Adequate Planning?					
Limitations in Funding?					
Political/Turf Issues?					

Section III.   INFORMATION AND TRAINING

1. How important is each source of information to your agency when planning for the purchase of communication technologies? (where 1= not important to 5= extremely important)

	1	2	3	4	5
Equipment manufacturers?					
Professional journals/magazines?					
Professional/Trade Conferences?					
Independent Consultants?					
Other government agencies?					
Local college or university?					
Other:					

2. Does your agency participate in joint training exercises with other organizations that involve the actual use of communication equipment?

◯ Yes   ◯ No - SKIP to question #4

3. Regarding question #2 above, indicate the levels of other organizations that participate in the joint training exercises. Include both government and non-government organizations. Fill in ALL that apply.

◯ Federal Level   ◯ State Level   ◯ Local Level

4. How well do you believe your agency's training has prepared your staff to handle communication interoperability situations? (where 1= poor to 5= excellent)

1   2   3   4   5

5. How familiar is your agency with the following? (where 1=no knowledge to 5=very knowledgeable)

Project 25 Standards?

FCC Refarming efforts?	

FCC Frequency
   Application Process?

NPSPAC Regional
   Planning Process?

FCC Internet Sites?	

TIA/EIA-102
   Specifications?

FCC Spectrum Allocation/
   (746-806MHz)?

Section IV. COMMUNICATION SYSTEMS

1. **Indicate the types of communication equipment used by your agency. Fill in ALL that apply.**

- ◯ Hand-held land mobile radio
- ◯ Vehicle-mounted land mobile radio
- ◯ Pagers
- ◯ Citizens band radio
- ◯ Amateur radio
- ◯ Telephone line
- ◯ FAX line
- ◯ Cellular phone/voice
- ◯ Cellular FAX
- ◯ Mobile data terminal (Dumb-Terminal)
- ◯ Mobile laptop computer
- ◯ EKG or other Medical Telemetry
- ◯ Fixed Wing Aircraft Radio
- ◯ Helicopter Radio

2. **Which best describes your PRIMARY land mobile radio base system.**

    ◯ Analog   ◯ Digital

3. **Does your agency use BOTH analog AND digital radio systems?**

    ◯ Yes   ◯ No

4. **Which best describes your PRIMARY land mobile radio system?**

- ◯ Conventional (not trunked)
- ◯ Trunked

5. **Does your agency own or lease its PRIMARY land mobile radio system? Fill in ONLY ONE.**

  ◯ Own   ◯ Lease   ◯ Does not apply

6. **How many repeaters are in your land mobile radio system?**

	Repeaters

7. **Which of the following best describes your agency's communications arrangements?**

- ◯ Independently owned and operated communications center used exclusively by our department.
- ◯ Part of a communications center that serves several public safety and/or public service organizations in our jurisdiction.
- ◯ Part of a multi-agency, multi-jurisdictional shared communications center.
- ◯ Other? Please describe:

   _____

   _____

8. **Approximately how old is your CURRENT land mobile radio system?**

	years old

9. **Identify the radio frequencies your agency CURRENTLY uses for by indicating the current NUMBER of channels in each band. Include ALL channels used for VOICE and/or DATA transmissions. Fill in ONLY those that apply.**

CURRENTLY	CURRENT # of USES VOICE & DATA channels
◯ Does not apply	
Low band VHF (25-50 MHz)	
High band VHF (150-174 MHz)	
UHF (406-512 MHz)	
800 MHz (806-869 MHz)	
Other _____	

10. **How serious are the following problems regarding your land-mobile radio system? (where 1=not a problem to 5=major problem)**

	1	2	3	4	5
Not enough channels?	☐				
Not enough talk group	☐				
Dead spots?	☐				
Fading?	☐				
Frequency Interference	☐				
Static?	☐				
Battery problems?	☐				
Not enough equipment	☐				
Outdated equipment?	☐				
Equipment Size/Weight					
Different Types of Equipment?					
Operational Difficulty?					

11. **If you marked "not enough channels" in question #10 as a problem, estimate the number of ADDITIONAL channels your agency needs for each of the following.**

☐ ADDITIONAL VOICE-ONLY Channels

☐ ADDITIONAL DATA-ONLY Channels

☐ ADDITIONAL ALTERNATE VOICE &/or DATA Channels

12. **Does your agency have plans to replace or substantially upgrade its land mobile radio system within the next ten years?**

◯ Yes   ◯ No - SKIP to question #19

13. **In what year does your agency plan to replace or substantially upgrade its land mobile radio base system?**

☐☐☐

14. **What is your agency's preference for its NEXT land mobile radio base system?**

◯ Analog   ◯ Digital   ◯ Don't know

15. **Does your agency plan to use BOTH analog AND digital radio systems?**

◯ Yes   ◯ No   ◯ Don't know

16. **What is your agency's preference for its NEXT land mobile radio base system?**

◯ Conventional (not trunked)

◯ Trunked

◯ Don't know

17. **Identify the radio frequencies your agency needs for its NEXT land mobile radio base system and indicate the TOTAL NUMBER of channels it will need in each band. Include all channels needed for VOICE and/or DATA transmissions. Fill in ONLY those that apply.**

CURRENTLY USES		TOTAL # of VOICE & DATA channels
◯	Does not apply	
	Low band VHF (25-50 MHz)	☐☐☐
	High band VHF (150-174 MHz)	☐☐☐
	UHF (406-512 MHz)	☐☐☐
	800 MHz (806-869 MHz)	☐☐☐
	Other _____	☐☐☐

18. **How does your agency plan to fund its next land mobile radio system?**

◯ State funding

◯ General fund budget appropriations

◯ Capital improvement budget

◯ Bond financing

◯ Fees

◯ Other _____

◯ Don't know

19. **Does your agency use a paging system for emergency "alerting" of personnel?**

◯ Yes   ◯ No- SKIP to question #24

20. **Which of the following best describes your agency's paging system?**

◯ Tone and/or voice   ◯ Both

◯ Alfa-numeric digital   ◯ Other _____

21. **Rate your agency's satisfaction with the performance of its paging system. (where 1 = not at all satisfied to 5 = extremely satisfied)**

1	2	3	4	5

22. **How important will interoperability ISSUES be to your agency when it purchases its next land mobile radio system? (where 1=not important to 5=extremely important)**

1	2	3	4	5

23. **How likely is it that your agency will adopt the Association for Public-Safety Communications Officials (APCO) Project 25 Interoperability Standards for its next land mobile radio system? (where 1=highly unlikely to 5=highly likely)**

1	2	3	4	5

Section V ADDITIONAL INFORMATION

The responses to the following questions will be scanned by a computer.
Please PRINT and stay within the boxes provided.

1. As new technologies are introduced and digital communications mature, do you think there should be federal or state mandates with "date-certain" timelines to ensure interoperability? ☐ Yes ☐ No
   Please explain your reasons.

2. Has the lack of wireless communications interoperability ever hampered your ability to respond to a call?
   ☐ Yes ☐ No If yes, briefly describe the situation and adjustments that were made.

3. What are the wireless communications interoperability issues for your department? How have you solved them?

4. Does the lack of wireless radio interoperability affect your department's ability to interact with other agencies in surrounding jurisdictions? ☐ Yes ☐ No   If yes, briefly describe how and adjustments that have been made.

5. What operational, technological or regulatory issues do you think should be considered in the planning and implementation of a nationwide WIRELESS network for public safety and emergency preparedness entities at all levels of federal, state and local government?

Place additional comments here.

If continuing comments from one of the questions on page 7,
please note the number of the question.